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STATUS AND DISTRIBUTION OF THE LARIDAE IN WYOMING THROUGH 1986

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ABSTRACT.—To date, 17 species of Laridae have been reported in Wyoming. Six of these species have known breeding populations in the state: the Ring-billed Gull (*Larus delawarensis*), California Gull (*Larus californicus*), Herring Gull (*Larus argentatus*), Caspian Tern (*Sterna caspia*), Forster's Tern (*Sterna forsteri*), and Black Tern (*Chlidonias niger*). Of these species, the California Gull is the most abundant and widespread. In 1984 approximately 7300 nests existed in Wyoming at six breeding locations consisting of 10 different colonies. In contrast, only small breeding populations have been discovered for the remaining five species. The Herring Gull is the most recent addition among Laridae known to nest in Wyoming. Likewise, two Ring-billed Gull colonies were recently found after not having been documented as breeding in the state for over 50 years.

Although some nesting colonies are threatened by habitat loss and human disturbance, most seem secure at present. Limited nesting and foraging habitat precludes establishment of large breeding populations of most Laridae in the state.

Key words: Laridae, historical records, inventory, population status, distribution, breeding, Wyoming.

Considerable interest and concern exist regarding conservation and management of colonially nesting waterbirds in the United States and elsewhere. These species occupy high trophic levels on aquatic food chains and are sensitive to disturbance of aquatic ecosystems, especially loss of wetland habitat and contamination by chemical pollutants. In addition, because most of these species nest in colonies, they are vulnerable to human intervention.

Findholt (1984) and Findholt and Berner (1988) reported on the status and distribution of the Ciconiiforms in Wyoming. The purpose of this paper is to provide information on the historical and present status and distribution of the Laridae in the state.

METHODS

Data-collection methods utilized were previously reported (Findholt 1984, 1986a, Findholt and Berner 1988). From 1981 through 1986, but more intensively during the 1984–86 period, I conducted a comprehensive statewide inventory for colonially nesting waterbirds in Wyoming. From 4 April to 31 May 1984 and from 28 March to 5 June 1986, I made 15 aerial surveys in fixed-wing aircraft totaling 67.1 h of flight time to locate new nesting areas. Reservoirs, lakes, marshes, and other potential breeding locations not observed during aerial searches were checked from the ground with binoculars or a 20–45X spotting scope. Breeding colonies were usually censused by making total ground counts of nests. Where ground counts were not feasible, I estimated the number of nests (ground estimates). Colonies were censused when most birds were in late incubation or early hatching stages, and censuses were based on a single visit.

As discussed by Buckley and Buckley (1979), a waterbird colony is difficult to define. Therefore, I used Kushlan's (1986) definition, which is an assemblage of nesting birds. Nests were considered active if adult birds were sitting or standing on nests, incubation was observed, or eggs or young were present (McCrimmon 1982).

Additional sources of information included a literature review, an examination of the files of the Wyoming Game and Fish Department, and correspondence with biologists, naturalists, birdwatchers, and others considered knowledgeable of the Laridae in Wyoming. This paper includes records through 31 December 1986.

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RESULTS AND DISCUSSION

Pomarine Jaeger

There is one record of the Pomarine Jaeger (*Stercorarius pomarinus*) from Wyoming. J. and V. Herold observed an adult individual at Burlington Lake (Goldeneye Reservoir), 24 km northwest of Casper, Natrona County, on 15 May 1980. On the following day, O. K. Scott and B. Stratton saw the jaeger at the same location and confirmed its identity.

According to the AOU Check-list of North American Birds (1983), the Pomarine Jaeger breeding range occurs along northern coastal areas in North America. Thus, only accidental occurrence is expected in Wyoming.

Parasitic Jaeger

O. K. Scott discovered the first Parasitic Jaeger (*Stercorarius parasiticus*)in Wyoming at Soda Lake, Casper, Natrona County, on 2 September 1962. Two more Parasitic Jaegers were observed at Jackson Lake, Grand Teton National Park, Teton County, on 22 June 1975 by M. and B. Raynes. On 24 October 1977, H. Downing and M. Collins reported one immature individual at Lake DeSmet, near Buffalo, Johnson County. One year later another immature bird was observed at Lake DeSmet by M. Collins on 28 August. An immature Parasitic Jaeger was seen at Soda Lake, Natrona County, by J. and V. Herold on 14 November 1981. On 4 September 1983, G. Scott found one individual at Bates Creek Reservoir, south of Casper, Natrona County. The most recent record of this species is from Healy Reservoir, east of Buffalo, Johnson County, when H. Downing and M. Collins observed an adult bird on 21 June 1985.

The Parasitic Jaeger is mostly pelagic, breeds north of the conterminous United States, and generally winters offshore along ocean coasts (AOU 1983). Therefore, only accidental occurrence is anticipated in Wyoming.

Franklin's Gull

The first record of the Franklin's Gull (*Larus pipixcan*) in Wyoming is a specimen collected near Wheatland, Platte County, on 6 May 1912 (Grave and Walker 1913). McCreary (1939) stated that this species occasionally occurred in the state, and on 5 May 1933, 37 individuals were seen near Torrington, Goshen County; some birds remained in the area until 12 May. Also, A. B. Mickey observed a Franklin's Gull near Lake Hattie, southwest of Laramie, Albany County, on 7 May 1933 (McCreary 1939). Oakleaf et al. (1982) considered this species a common summer resident and recorded it in 20 (71%) of 28 degree blocks and breeding in one block. The only nesting record is from Beck Lake near Cody, Park County, where U. Kepler found 10–20 nesting Franklin's Gulls in 1977 (Kingery 1977). In my intensive statewide survey for Franklin's Gull nesting sites, I found none at Beck Lake or elsewhere in Wyoming. Based on the lack of suitable nesting habitat at Beck Lake, the validity of this breeding record is questionable.

Breeding records exist for this species in adjacent states of Idaho (Larrison et al. 1967, C. H. Trost personal communication), Montana (Skaar 1980), South Dakota (Johnsgard 1979), and Utah (Behle and Perry 1975).

Bonaparte's Gull

Knight (1902) considered the Bonaparte's Gull (*Larus philadelphia*) a rather rare migrant in Wyoming and provided details of several records from the state. In addition to Knight's records, Grave and Walker (1913) reported one individual taken from near Sheridan, Sheridan County, by Metz. McCreary (1939) indicated that the Bonaparte's Gull was a frequent migrant in eastern Wyoming and sometimes common. This species has been listed as occurring in Yellowstone National Park (Skinner 1925). More recently, Oakleaf et al. (1982) considered the Bonaparte's Gull an uncommon migrant and reported it from 10 (36%) of 28 latilong blocks.

Because this species breeds north of the conterminous United States (AOU 1983) and does not appear to be expanding its range southward, it is highly unlikely that Bonaparte's Gulls will be discovered nesting in Wyoming.

Heermann's Gull

On 26 September 1984, O. K. Scott et al. discovered a Heermann's Gull (*Larus heermanni*) at Soda Lake, approximately 3 km north of Casper, Natrona County (Kingery 1985). This is the first record of this species in Wyoming.

The Heermann's Gull breeds in the vicinity of Baja California and is a coastal species ranging from southern British Columbia south to Guatemala (AOU 1983). Thus, only accidental occurrence is expected in Wyoming.

Mew Gull

Two historical records exist in Wyoming for the Mew Gull (*Larus canus*). One juvenile bird was collected by V. Bailey on Lake Fork, a tributary of the Green River in the Wind River Mountains, Sublette County, on 28 August 1893 (Oberholser 1919). This specimen is located in the U.S. National Museum. Another Mew Gull was taken near Laramie, Albany County, by A. E. Lockwood prior to 1913 (Grave and Walker 1913). No recent records exist for this species in the state.

According to the AOU Check-list of North American Birds (1983), the Mew Gull breeds north of the contiguous United States. Based on the paucity of reports for this species in states that adjoin Wyoming, only accidental occurrence is anticipated in the state.

Ring-billed Gull

In the 1920s the Ring-billed Gull (*Larus delawarensis*) nested on the Laramie plains, Albany County, and on Yellowstone Lake, Yellowstone National Park (Knight 1902, Skinner 1917, Kemsies 1930). It is difficult to assess when the Ring-billed Gull disappeared as a breeding species in these two areas of the state. This species no longer breeds on the Laramie plains (Raper 1975, Findholt personal observation). Also, the Ring-billed Gull no longer nests in Yellowstone National Park (Schaller 1964, Diem and Condon 1967, K. L. Diem personal communication).

Two active Ring-billed Gull colonies were present at two locations in Wyoming during the 1984–86 period. On 21 May 1984, I counted 102 adults of this species and 70 nests with eggs at Soda Lake (42°54′N, 106°18′W), about 3 km north of Casper, Natrona County (Findholt 1986b). Although Ring-billed Gulls continued to nest at Soda Lake in 1985 and 1986, the colony was not censused. One additional Ring-billed Gull nesting colony was found in Wyoming at Ocean Lake (43°07′N, 108°35′W), approximately 24 km northwest of Riverton, Fremont County. On 22 May 1985, I counted 10 adults and 6 nests containing 2–3 eggs each on Peninsula Island. Twenty-three active nests were present on 31 May 1986.

Breeding records exist in adjoining states of Idaho (Larrison et al. 1967, C. H. Trost personal communication), Montana (Skaar 1980), and South Dakota (Johnsgard 1979).

California Gull

Two California Gull (*Larus californicus*) nesting colonies existed historically in Wyoming. One colony was discovered on the Molly Islands, Yellowstone Lake, Yellowstone National Park, in 1898 when Skinner (1917) estimated about 1000 gulls were present. The other colony, which contained an unknown number of California Gulls, was located on an island in Bamforth Lake, about 15 km northwest of Laramie, Albany County, since 1934 (McCreary 1939).

In 1984 there were six breeding locations consisting of 10 different colonies that included approximately 7300 nests (Findholt 1986a). The six sites included both Yellowstone Lake and Bamforth Lake in addition to four recently occupied nesting areas. The new California Gull colonies are located at Pathfinder Reservoir, Carbon County (42°23′N, 106°56′W); Ocean Lake, Fremont County (43°07′N, 108°35′W); Sand Mesa, Fremont County (43°19′N, 108°20′W); and Soda Lake, Natrona County (42°54′N, 106°18′W). Although California Gulls continued to nest at all six locations during the 1985–86 period, none of the colonies were censused. Also, only 5–10 pairs appeared to be present at Sand Mesa in 1985 and none in 1986. The decline in the Sand Mesa nesting population is a result of intentional destruction of nests by the Wyoming Game and Fish Department to supposedly enhance Canada Goose (*Branta canadensis*) production.

The overall increase in the California Gull nesting population in Wyoming since historical times is most likely a result of human-induced environmental changes. These changes have created additional breeding habitat and new food sources (Findholt 1986a).

This species breeds in adjacent states of Colorado (Ryder 1978), Idaho (Larrison et al. 1967, C. H. Trost personal communication), Montana (Skaar 1980), and Utah (Behle and Perry 1975).

Herring Gull

Knight (1902) considered the Herring Gull (*Larus argentatus*) very rare in Wyoming and noted that there was only one record from the state. This species apparently increased in numbers during the early 1900s and was reported as being a common summer resident at Yellowstone Lake and in the Big Horn Basin (Grave and Walker 1913). Later, McCreary

(1939) considered the Herring Gull a moderately common migrant seen around the lakes of the eastern part of the state and along the North Platte River. Recently, Oakleaf et al. (1982) reported this species to be an uncommon migrant that had been observed in 12 (43%) of 28 degree blocks.

In 1984 three Herring Gull nests were located at Bamforth Lake, Albany County (B. H. Pugesek personal communication). This is the first record of this species breeding in Wyoming. One to three pairs of Herring Gulls continued to nest at Bamforth Lake in 1985 and 1986.

Although the Herring Gull has been reported from adjoining states of Colorado (Bailey and Neidrach 1965, Ryder 1978), Idaho (Larrison et al. 1967), Montana (Skaar 1980), Nebraska and South Dakota (Johnsgard 1979), and Utah (Behle and Perry 1975), I am unaware of breeding records from these states except for recent evidence of nesting at Antero Reservoir, Park County, Colorado (Chase 1987).

Glaucous Gull

The first record of the Glaucous Gull (*Larus hyperboreus*) in Wyoming is of a bird collected by E. Isberg at Lake Hattie, Albany County, on 23 November 1933 (McCreary and Mickey 1935, McCreary 1939). Another report of this species by A. B. Klots in McCreary (1930) was not mentioned later (McCreary 1939), possibly because the validity of the report was questionable.

There are three recent observations of the Glaucous Gull in Wyoming. On 23 September 1969, K. L. Diem observed one individual near Laramie, Albany County. A second Glaucous Gull was seen south of Laramie by W. Hepworth on 20 June 1979. The most recent report of this species from Wyoming is of a bird seen by O. K. Scott at Soda Lake, Natrona County, on 1 May 1982.

Few observations of Glaucous Gulls are expected in Wyoming because this species prefers coastal areas and large inland bodies of water and its breeding range is north of the contiguous United States (AOU 1983).

Black-legged Kittiwake

The Black-legged Kittiwake (*Rissa tridactyla*) was first reported in Wyoming by Knight (1902). One bird was collected by M. Jeserum near Douglas, Converse County, on 18 November 1898. Two more birds were observed at Dubois, Fremont County, on 22 October 1974 by M. Back (Kingery 1975). This is the only recent record of this species in Wyoming.

Because the Black-legged Kittiwake is primarily a pelagic species and breeds north of the contiguous United States (AOU 1983), only accidental occurrence is anticipated in Wyoming.

Sabine's Gull

McCreary (1939) indicated that the Sabine's Gull (*Xema sabini*) is rare in Wyoming. Two specimens were taken by A. E. Lockwood in the fall near lakes on the Laramie plains, Albany County (Grave and Walker 1913). Another Sabine's Gull was found dead near Douglas, Converse County, by K. Cook and A. Hay on 24 October 1937 (McCreary 1939).

Since 1954 there have been approximately 24 reports of Sabine's Gulls in Wyoming consisting of 28 individual birds. All sightings were made in September and October except for a subadult observed at Lake DeSmet, Johnson County, by J. Daly on 7 June 1981. The Sabine's Gull has been located in 7 (25%) of 28 latilong blocks and is considered a rare migrant in the state (Oakleaf et al. 1982).

According to the AOU Check-list of North American Birds (1983), the Sabine's Gull is primarily pelagic and breeds north of the contiguous United States. Thus, this species is expected to be seen rarely in Wyoming and then mostly during migration.

Caspian Tern

Skinner (1917) observed Caspian Terns (*Sterna caspia*) on the Molly Islands, Yellowstone Lake, Yellowstone National Park, but was unable to determine whether they were nesting. On 4 June 1932, Wright (1934) also saw this species on the Molly Islands and presumed it to be a breeder but failed to locate a nest. Kemsies (1930) first documented breeding Caspian Terns on the Molly Islands when he found eggs and downy young on 29 June 1929. Between 1932 and 1966 the number of Caspian Tern nests varied from a low of 4 nests on 5 July 1959 to a high of 18 on 24 June 1966 (Diem and Condon 1967). In 1955 Warkley found evidence of Caspian Terns nesting at Ocean Lake WHMA (Scott 1955). Also, McCreary (1939) indicated that A. B. Mickey located a pair on an island at Bamforth Lake,

Albany County, in the summer of 1936. One nest of this species was discovered at Bamforth Lake in 1974, and two pairs appeared to nest there in 1975 (E. Raper personal communication). The most recent evidence of Caspian Terns nesting at Bamforth Lake is from 1983 when I counted four nests with eggs on 10 June. All nests were later destroyed by high water.

In recent years Caspian Terns have nested at five locations in Wyoming (Table 1). For unknown reasons, there has been a precipitous decline in the state's breeding population during recent surveys. The only active colony in 1985 and 1986 was at Pathfinder Reservoir.

Breeding records exist in Idaho (Larrison et al. 1967, C. H. Trost personal communication) and Utah (Behle and Perry 1975). I am unaware of nesting records in other states that adjoin Wyoming.

Common Tern

Bond (1885) was the first to list the Common Tern (*Sterna hirundo*) as occurring in Wyoming. This species was considered rare by both Knight (1902) and McCreary (1939). Two specimens were collected by McCarthy along the Sweetwater River, Natrona County, in 1859, and another bird was taken at Cheyenne, Laramie County, by F. Bond prior to 1902 (Knight 1902). Blackwelder may have seen a Common Tern in the Teton region (Grave and Walker 1913). Apparently, Woodbury (1937) collected a specimen at Yellowstone Lake, probably in 1931. Oakleaf et al. (1982) reported that the Common Tern was an uncommon summer resident in Wyoming, occurring in 9 (32%) of 28 latilong blocks. This species may occur in the state more frequently than reports indicate because of its similarity in appearance to the more common Forster's Tern.

Breeding records exist for the Common Tern in adjacent states of Idaho (C. H. Trost personal communication), South Dakota (Johnsgard 1979), and Montana (Skaar 1980).

Forster's Tern

Both Knight (1902) and Grave and Walker (1913) considered the Forster's Tern (*Sterna forsteri*) a rare migrant to be found only in the southeastern part of the state. McCreary (1939) indicated that this species was a common migrant in eastern Wyoming and summer resident in the southeastern portion of the state. One nest with two eggs was found on 31 May 1936 by A. B. Mickey at Bamforth Lake, Albany County, and a colony containing 12 nests was found at the same location on 2 July 1933 (McCreary 1939). Another nest of this species was discovered in Albany County as late as 21 July (McCreary 1939). Although Kemsies (1935) speculated that the Forster's Tern occurred fairly frequently in Yellowstone National Park and indicated that it may possibly breed in the marshes bordering Yellowstone Lake, thus far there has been only one record for the park.

Oakleaf et al. (1982) considered the Forster's Tern a common summer resident and reported it as a breeding species from one (3.6%) latilong and occurring in 20 (71%) of 28 latilongs. During the 1982–86 period, Forster's Terns

TABLE 1. Location, number of nests, and habitat of Caspian Tern colonies in Wyoming, 1983–86.

Name	Location	Number of nests				Habitat
		1983	1984	1985	1986	
Albany County						
Bamforth Lake						Lake
Bamforth Island	41°24′N,105°44′W	4	0	0	0	
Carbon County						
Pathfinder Reservoir						Reservior
Bird Island	43°23′N,106°56′W	NC[a]	15–20	23	29	
Natrona County						
Soda Lake						Reservoir
West Island	42°54′N,106°19′W	13	0	0	0	
Rattlesnake Island	42°54′N,106°18′W	0	1	0	0	
Yellowstone National Park[b]						
Yellowstone Lake						Lake
Molly Islands	44°19′N,110°16′W	12	3	0	0	

[a]NC = not censused.
[b]Data from K. L. Diem (personal communication).

TABLE 2. Location, number of nests, and habitat of Forster's Tern colonies in Wyoming, 1982, 1984–86.

Name	Location	Number of nests				Habitat
		1982	1984	1985	1986	
Albany County						
Caldwell Lake	41°09′N,105°48′W	NC[a]	NC	NC	19	Lake
Carroll Lake	41°25′N,105°44′W	NC	NC	15–20	3	Lake
Hutton Lake NWR	41°11′N,105°44′W	8–15	0	3	2–3	Marsh
Kay Ranch	41°15′N,105°42′W	2–3	0	0	0	Lake
Pilger Lake	41°23′N,105°50′W	NC	NC	NC	9	Lake
Fremont County						
Ocean Lake	43°07′N,108°35′W	NC	10	36	12	Reservoir
Lincoln County						
Bear River	42°01′N,110°58′W	0	2–3	0	0	Marsh

[a]NC = not censused.

nested at seven locations in Wyoming (Table 2). However, not all of these sites were active each year. Based on the 1986 colony censuses, approximately 45–46 nests were present. This compares to 10–18 active nests in two colonies during 1982. The increase in the breeding population is primarily a result of locating four new nesting areas during recent surveys. I am uncertain why Forster's Terns failed to nest on the Kay Ranch and Bear River in 1985 and 1986. Significant declines in nesting Forster's Terns were also noted at Ocean Lake and Carroll Lake in 1986. Fewer terns probably nested at Carroll Lake because of very low water levels that reduced nesting habitat. At Ocean Lake the decline may have been caused by the addition of more cobble to the man-made nesting islands, which made them more dome-shaped and less suitable as nesting substrate. Flooding of nests may also be a serious problem at Ocean Lake.

Breeding records exist for this species from adjoining states of Colorado (Bailey and Neidrach 1965), Idaho (Larrison et al. 1967, C. H. Trost personal communication), Montana (Skaar 1980), Nebraska and South Dakota (Johnsgard 1979), and Utah (Behle and Perry 1975).

Least Tern

McCreary (1939) indicated that the Least Tern (*Sterna albifrons*) was a summer resident along the North Platte River. The first sighting of this species was at Torrington, Goshen County, on 11 June 1929 (McCreary 1934, McCreary and Mickey 1935). J. W. Scott noted 8 or 10 individuals near Fort Laramie, Goshen County, on 25 June 1932 (McCreary 1934). One year later on 27 May the Least Tern was again reported from Torrington, Goshen County (McCreary 1939). No recent records exist in the state for this species.

The Least Tern breeds locally and irregularly in South Dakota and Nebraska (Johnsgard 1979). I am unaware of nesting records from other states that are adjacent to Wyoming.

Black Tern

Bond (1885) was the first to list the Black Tern (*Chlidonias niger*) as occurring in Wyoming. This species was considered a rare migrant in the state by Knight (1902). Grave and Walker (1913) indicated that there were records of Black Terns from Cody, Park County; Sheridan, Sheridan County; Lake Como, Albany County; Cheyenne, Laramie County; and Douglas, Converse County. McCreary (1939) noted this species as being a common migrant in eastern Wyoming and a summer resident in the southeastern portion of the state. Henninger (1915) found a nest containing one egg near Bamforth Lake on 12 June 1914. This was the first documentation of nesting by Black Terns in Wyoming. In Yellowstone National Park, Kemsies (1930) reported that the Black Tern was a frequent migrant and probable summer resident. This species is considered a common summer resident by Oakleaf et al. (1982) and has been reported from 20 (71%) of 28 latilong blocks with strong evidence of breeding from 2 latilongs. On 3 June 1982, I discovered 2–4 nesting pairs of Black Terns with eggs on the Kay Ranch, about 10 km southwest of Laramie, Albany County. From 1984 through 1986 this species nested at three locations in Albany County and in the marshes associated with the Bear River, south of Cokeville, Lincoln County (Table 3). Since 1984, new Black Tern colonies have been discovered at Carroll and Caldwell

TABLE 3. Location, number of nests, and habitat of Black Tern colonies in Wyoming, 1984–86.

Name	Location	Number of nests			Habitat
		1984	1985	1986	
Albany County					
Caldwell Lake	41°09′N,105°48′W	NC[a]	NC	2–3	Lake
Carroll Lake	41°25′N,105°44′W	NC	10–15	2–3	Lake
Hutton Lake NWR	41°11′N,105°44′W	7–10	8–10	1–2	Marsh
Kay Ranch	41°15′N,105°42′W	0	0	0	Lake
Lincoln County					
Bear River	42°01′N,110°58′W	100–150	NC	NC	Marsh

[a]NC = not censused.

lakes. For unknown reasons, this species failed to nest at the Kay Ranch during the 1984–86 period and has not been documented as breeding there since 1982. Population trends of Black Terns are unknown in Wyoming because most colonies have been monitored an insufficient number of years. Also, numbers of Black Terns nesting in the marshes adjoining the Bear River have not been censused since 1984.

This species has been found nesting in the following states that adjoin Wyoming: Colorado (Bailey and Neidrach 1965), Idaho (Larrison et al. 1967, C. H. Trost personal communication), Montana (Skaar 1980), Nebraska and South Dakota (Johnsgard 1979), and Utah (Behle and Perry 1975).

CONCLUSIONS

In recent years observations of nonbreeding species of gulls, terns, and jaegers have increased in Wyoming. I believe these increases are primarily a result of more surveys being conducted by professional biologists and more time spent in the field by greater numbers of amateur birdwatchers. Of the 11 nonbreeding Laridae documented in the state, the Pomarine Jaeger and Heermann's Gull were reported for the first time since 1980. Also, the majority of sightings of other nonbreeding species have occurred during the last 10–15 years. Observations of these species will most likely continue to increase as more individuals take up birdwatching as a hobby in Wyoming. Alternative explanations for increased reports of nonbreeding species of Laridae are range expansions or changes in migration routes. I am unaware of evidence from Wyoming or elsewhere for either explanation.

It is unknown whether breeding populations of some Laridae in Wyoming have recently increased or whether new colonies are the result of intensive surveys. I believe that evidence exists for recent population increases of the Ring-billed Gull, California Gull, and Herring Gull in the state. Reasons for proliferation of California Gull, and possibly Ring-billed Gull and Herring Gull, populations in Wyoming include construction of large reservoirs with isolated islands for nesting as well as creation of new food sources such as garbage dumps, other human refuse, and agricultural land (Findholt 1986a). Breeding populations of these species apparently are expanding throughout the western United States (Conover 1983, Chase 1987). In contrast, I believe most new colonies of Caspian Terns, Forster's Terns, and Black Terns are a result of current surveys, and not the result of recent breeding range expansions into Wyoming. However, the addition of at least a few new colonies of Caspian Terns and Forester's Terns in Wyoming since historical times appears to be the result of human-caused environmental changes, especially the construction of reservoirs, which have created nesting and foraging habitat.

With the exception of the California Gull, which is a relatively abundant and widespread nesting species in Wyoming, breeding populations of the other five species of Laridae that nest in the state are small. It appears that limited nesting and foraging habitat restricts population sizes of most gulls and terns. Also, because Wyoming is at the edge of the breeding range of most species currently nesting in the state, populations may remain small.

It seems unlikely that nesting populations of the 11 nonbreeding Laridae will be documented in Wyoming, except for the Franklin's Gull and Common Tern, because the breeding range of most species occurs along coastal areas or north of the contiguous United States. The only other species, in addition to the

Franklin's Gull and Common Tern, that nests in states that adjoin Wyoming is the Least Tern. Since the Least Tern nests locally and irregularly in South Dakota and Nebraska and does not appear to be expanding its range, it seems unlikely that it will be found nesting in Wyoming (Johnsgard 1979).

It is difficult to assess long-term population trends of most Laridae that currently breed in Wyoming because of the limited number of years that population data are available. However, results presented in this paper will serve as baseline data that can be used to evaluate future population changes in the state.

Because most breeding colonies are currently protected in Wyoming, prospects for maintaining viable nesting populations appear good. It is my hope that natural resource management agencies will continue efforts to monitor long-term population changes and will implement appropriate management strategies to ensure that currently unprotected breeding populations of Laridae are maintained in the state.

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